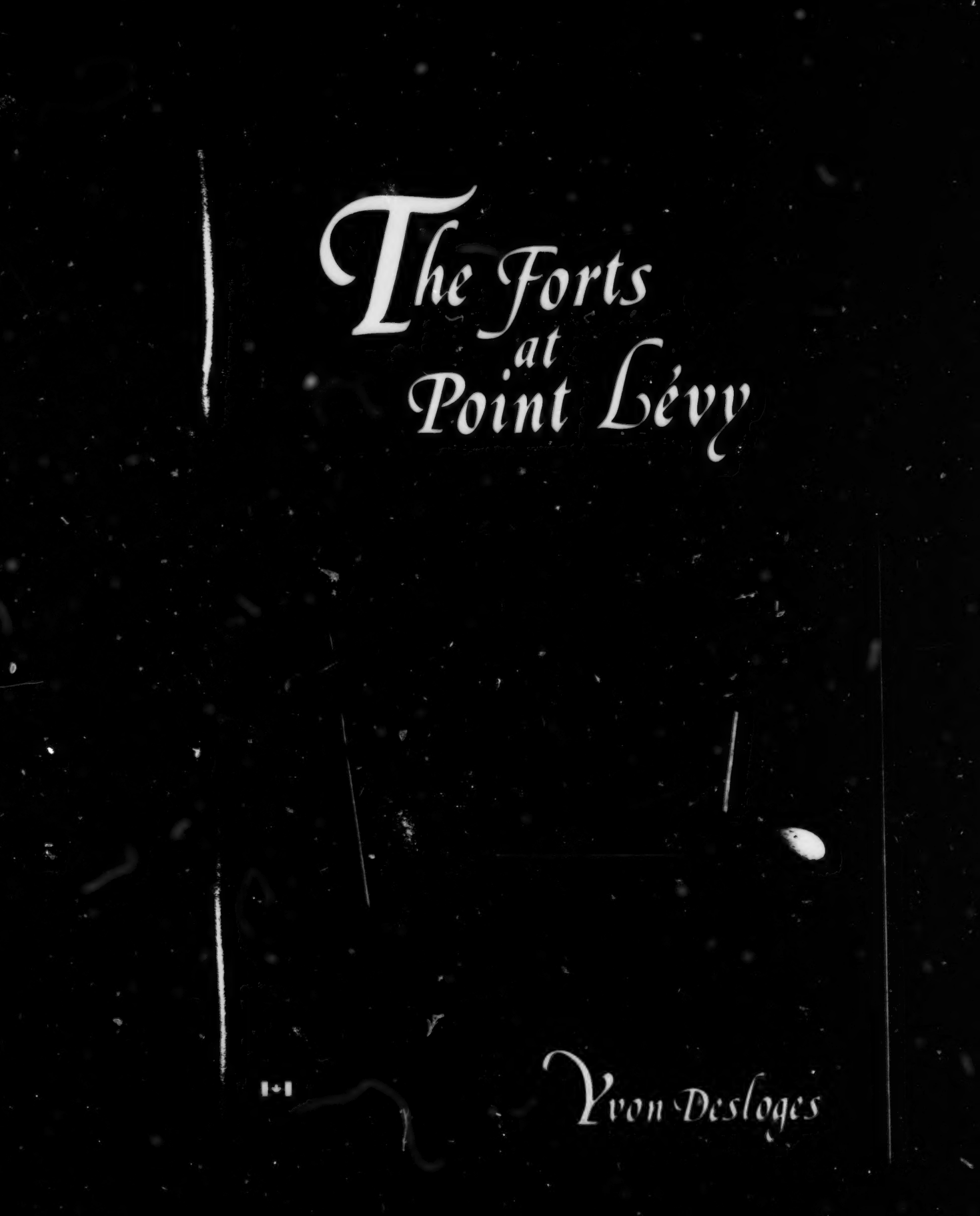
The Forts at Point Lévy



Yvon Desloges

The Forts at Point Lévy

Yvon Desloges

Translated from original French text

Studies in Archaeology, Architecture and History

National Historic Sites
Parks Service
Environment Canada

91-03734/

©Minister of the Environment Ottawa, 1991

Available in Canada through authorized bookstore agents and other bookstores, or by mail from the Canada Communication Group, Publishing, Supply and Services Canada, Ottawa, Ontario, Canada K1A 0S9.

Published under the authority
of the Minister of the Environment,
Ottawa, 1991.

Translation: Department of the Secretary of State
Editing: Sheila Ascroft
Design: Louis D. Richard
Electronic page layout: Suzanne Rochette
Cover: Rod Won
Cover Photo: Jacques Beardsell,
Canadian Parks Service, Quebec Region

Parks publishes the results of its research in archaeology, architecture, and history. A list of publications is available from Research Publications, Parks Service, Environment Canada, 1600 Liverpool Court, Ottawa, Ontario K1A 0H3.

Canadian Cataloguing in Publication Data

Desloges, Yvon

The forts at Point Lévy

(Studies in archaeology, architecture and history,
ISSN 0821-1027)
Issued also in French under title: Les forts de la Pointe Lévy.
Includes bibliographical references.
ISBN 0-660-13802-6
DSS cat. no. R61-2/9-53E

1. Fortification — Québec (Quebec) — Design and construction. 2. Military architecture — Québec (Quebec). 3. Québec (Quebec) — Antiquities. I. Canadian Parks Service. National Historic Sites. II. Title. III. Series.

UG415.Q4D44 1991 725'.18'09714471
C91-098540-5

Table of Contents

Introduction 5

Background 7

European and North-American Political Contexts 11

Colonial Security and British Funding 15

Ancillary Building 23

Forts #2 and #3 37

Fort #1 49

Epilogue, 1871-1947 63

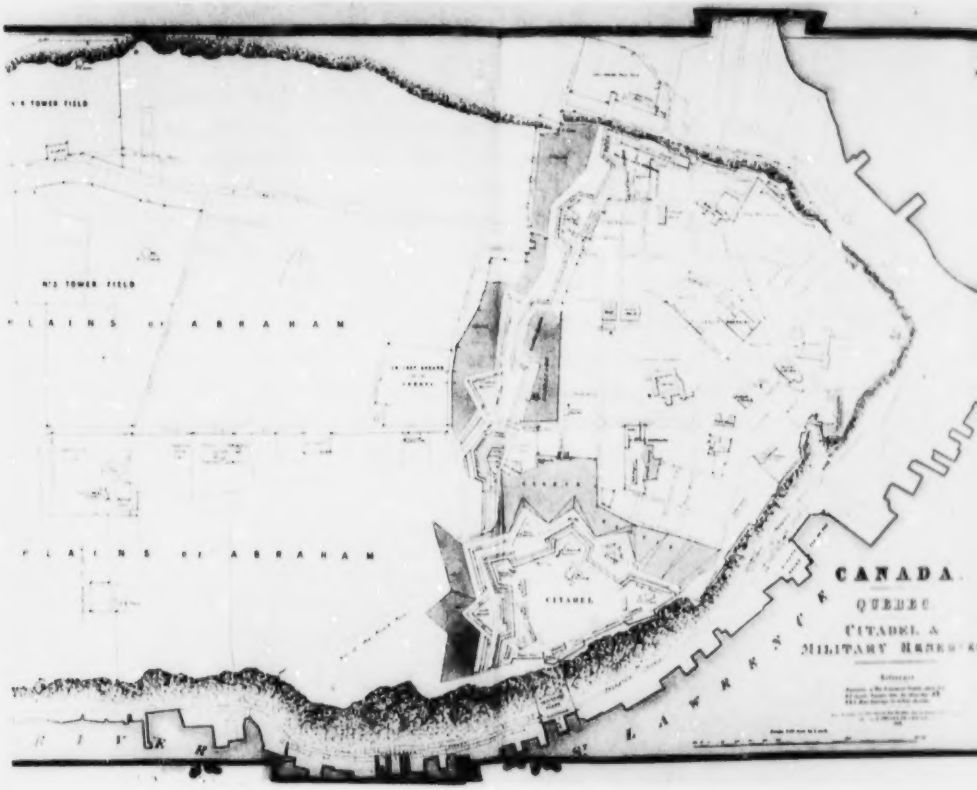
Notes 71

Suggested Readings 72

Introduction

The forts at Point Lévy, across from Quebec City, bear witness to the transition from classic to modern military construction, when military engineers abandoned the continuous rampart in favour of "detached forts." These forts also illustrate the colonial past of Canada. Built just as the country was becoming independent, they exemplify the work of British strategists on the North American continent.

The following pages describe the construction of these forts and thus try to understand the ideas of their designers and builders. To accomplish that, the building site is put in its political context, the working conditions of the military and civilian labourers described, and the repercussions of such an enterprise outlined.



1 The defensive works of Quebec City in 1862. The rampart of the Upper Town, the Citadel and the Martello Towers protect the north bank only. In a vulnerable position, Point Lévy could not prevent an enemy from taking over and bombarding Quebec City and its port, and thus controlling all navigation.
A.C. Cooke and H. James, 1862, National Archives of Canada, C-55490.

Background

In 1865, the general staff of the British forces integrated Point Lévy into Quebec City's fortified system. Thus, defence would no longer depend solely on the installations on the north shore — four Martello towers, the ramparts of the Upper Town, or even the Citadel. It would also rely on three future forts on the heights of Point Lévy (now the town of Lévis-Lauzon).

The expression "heights of Point Lévy" indicates that topographical features were taken into consideration when choosing construction sites. We have only to recall the special position of Quebec City with its Lower Town wedged between the river and the cliff, and its Upper Town built on the clifftop. On the south shore, these same features are found, except that the cliff's elevation gains ground by successive plateaus. On the north shore, the escarpment is crowned with an eagle's nest — the Citadel. On the other side, two of the three forts at Point Lévy are built on the highest terrace on the south shore, at approximately the same elevation as the Citadel.

Between the headland of Quebec City's promontory and the south shore, the river narrows to scarcely a kilometre (half a mile) in width. Therefore, the British forces had to be in command of this strait in order to control the port of Quebec City.

From the colony's earliest days and again toward the 1860s the port represented the military gateway for troops and equipment. In his project for the town of Ludovica on the St. Charles River, Champlain wanted to build a fort on the south shore, which, together with one on the north shore, would protect the waterway. But neither Ludovica nor the forts were built. In 1660, Governor Pierre Dubois d'Avaugour renewed the idea of building the forts on the south shore and three years later submitted the plans for this project. These works would complete the fortifications proposed for the Upper Town. However, because of lack of funds, the project died.

2 The Algonquins used the word "Quebec" for the point where the north and south banks of the St. Lawrence River narrows.
Photograph, origin unknown, 1865, National Archives of Canada, C-17603.

3 In 1702 France and England were at war in Europe and in their North American colonies. A British attack on Quebec City seemed imminent so the military engineer Levasseur de Neré installed two batteries of cannon on the south shore. Along with those on the north shore, they controlled the river.
Levasseur de Neré, 1702, copy by Charles Baudoin, National Archives of Canada, C-15788.

Some 40 years later, the engineer Jacques Levasseur de Neré put up two batteries of cannon at Lévis, to reinforce the defence of the capital and the port. During the siege of Quebec City in 1759, the British army took up positions on the south shore, and its batteries subjected the town to sustained and devastating fire.

Subsequently, the idea of putting up large-scale military installations on the south shore resurfaced occasionally. Most notably in 1778 at the suggestion of Governor Haldimand's secretary, Edward Foy; he proposed constructing forts there to back up Quebec City's first Citadel. But this project, like many later ones, failed before it began due to lack of funds. The financial aspect proved the stumbling block for most of these projects, since English military engineers always had to cope with budgetary restrictions.

However in 1864, despite England's economic difficulties, the British parliament voted some 200 000 pounds sterling (then about a million dollars) for the construction of forts on the south bank. These new fortifications, like those in Quebec City, would ensure liberty of movement to British ships in and out of the Quebec port. For more than 20 years, England had become progressively disinterested in her colony; but this somewhat spectacular gesture can be explained by the political situation in Europe and in America.

European and North-American Political Contexts

On the European political scene, British diplomacy was attempting the peaceful conclusion of several conflicts both in the Mediterranean and in many parts of the continent. But one situation was of special concern to the English powers: the reunification of Germany and the inevitable faceoff between Germans and Austrians. Although Great Britain remained faithful to her policy of non-intervention, her supplies of Scandinavian timber via the Baltic Sea were jeopardized. The Austro-German war, and the resulting reactions in Europe, directly menaced England's imports of timber, a vital commodity which some years earlier had been shipped from Quebec City.

In America, the Civil War broke out in 1861 with the Southern states against those of the North. From the beginning of the conflict, England opted for neutrality hoping to protect her supplies of raw cotton from the Southern plantations, without, on the other hand, alienating the Northern states, lest they take revenge on the Canadians. When the Northerners, with their maritime blockade, deprived the English mills of their cotton, the British industries had to call upon their colonial resources in India and Egypt.

In the first years of the war, when the slave states were piling up victories, England and its Canadian colony expected a Southern victory. If that happened, the Northern states might try to compensate for the loss of part of their country by annexing Canada.

The political situation was equally important to the Canadians. The colony had already expressed its wish for political autonomy, but insisted that England assume the costs of defence, feeling that the expected invasion would be the result of Great Britain's foreign policy. If absolutely necessary, the colony would agree to subsidize the costs of raising militia and

4 The Grand Trunk station in Lévis (the long building in the centre) about 1865. For 10 years the Grand Trunk had linked Portland with Lévis, making the railway a potential invasion route. It was realized that the Americans could use it to camp in front of Quebec City and paralyze the river traffic. The photo shows the narrowness of the river between its two banks, and the outline of Point Lévy.
Louis-Prudent Vallée, ca 1865, Archives nationales du Québec, Quebec City, coll. Vallée, L.P., GH 1071-5.

erecting various defensive works, but the Canadian Members of Parliament hesitated to get involved in vast military projects because these, financed by loans, might discourage neighbouring colonies inclined to join the future federation.

On this European and North-American background another menace was outlined: it came from a secret association of Irish immigrants to the United States, the Fenians. Feeling that England was oppressing the Irish people, they were preparing to raid Canada so that Great Britain would concentrate part of her troops there, and cut back on her military presence in Ireland.

In sum, three factors pushed England into constructing forts on the heights of Point Lévy from 1865 on; nevertheless, it must be noted that the main strategy was to repel an eventual American invasion. The Fort Lévy cannons would point not toward the port but toward United States. Since the Grand Trunk Railway connected Portland and Montréal via Lévis, this could be the route that would lead invading Americans directly to Quebec City. With the enemy in control of Point Lévy's heights, Great Britain would be unable to supply or withdraw its troops stationed in Canada. So the greatest importance was placed on assuring the security of the port for English shipping, both merchant and military, in anticipation of an American invasion.

5 The Commission presided over by the Royal Engineer John William Gordon (2nd from the left), included a representative from the Royal Navy, one from the Royal Artillery, another from the military administration, and two civilians.
Photo: W. Notman; original in the National Army Museum, London.

Colonial Security and British Funding

In 1862 an embryonic Canada and England were questioning their colonial links. The Imperial politicians had to decide how to maintain this link without contracting rash expenditures, but still turning over responsibility for its own defence to the future federation. This question gave rise to a Commission of Enquiry presided by Colonel J.W. Gordon (1862), and also to two reports on the defence of Canada (1864 and 1865) written by William Drummond Jervois.

The Gordon Commission arrived in Canada in 1862, when tensions had flared up between Great Britain and the United States following the boarding of the British ship *Trent* some months earlier by Northerners. This special Commission had to investigate the Canadian military situation taking into account four points: the total available strength of the army, the existing fortifications, the naval force on the Great Lakes, and communications. As well, the commissioners had to divide the responsibilities and costs between the colony and the motherland. In brief, they had make a political decision: should England defend Canada or abandon her?

The Commission's report mirrored the emotions raised in Great Britain and in the colony by both the outbreak of the Civil War and the Southern victories. Basing its conclusions on the premise that the United States constituted "a new military power," the Commission recognized the strategic importance of Quebec City without neglecting the defence of the frontier. Thus the commissioners foresaw a vast construction program of permanent fortifications. Most would be in Canada West (the future Ontario) with some in Canada East, principally in Montréal and Quebec City. They also pointed out the prime importance of a naval force to repel any future maritime invasion. A war fleet would ensure the river's defence between Quebec City and Mon-

tréal, while widening the canals would give Canada supremacy over the Great Lakes from the moment war broke out.

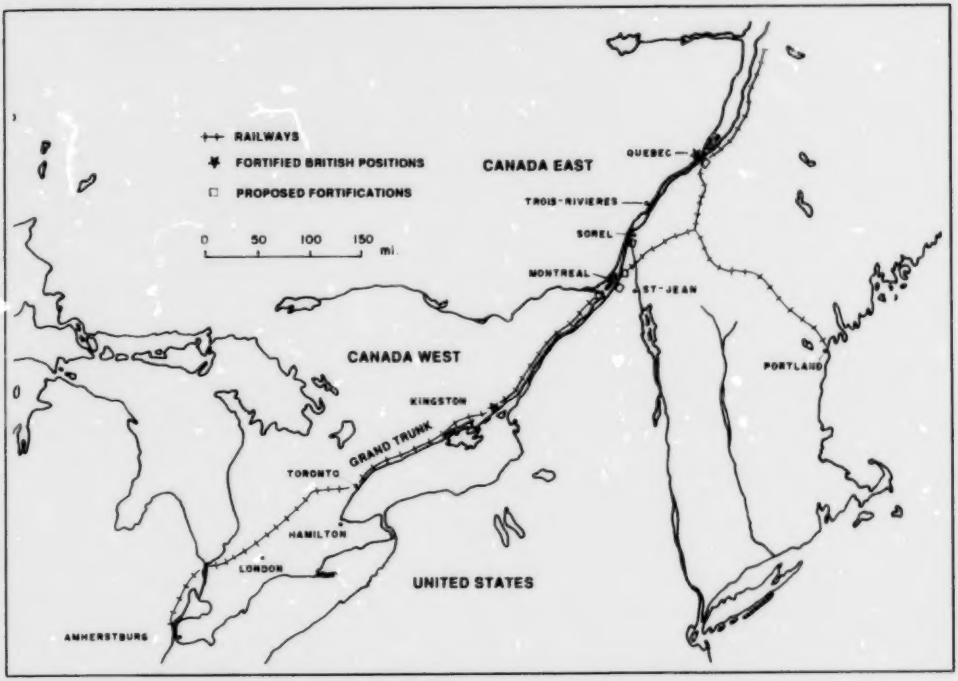
Although the commissioners envisaged no direct attack on the city of Quebec, they wanted it protected since it was the centre of communications with the motherland and thus "the key of the country." Apart from various military developments in the city and vicinity, the commissioners recommended the construction of a permanent fort on the plateau south of the church on Point Lévy, armed with 30 cannon and sheltering 500 men. This construction would cost 50 000 pounds (about $250 000).

The Commission's report did not please the British parliamentarians. The total cost of the planned improvements would come to 1 611 000 pounds, an exorbitant sum in the English economic context. So the project died, especially since the Commission, contrary to its instructions, had neglected to divide up the cost.

In 1863, the tide turned in the United States. The North seemed to be winning. The possibility of retaliation was heightened, and defence remained an outstanding problem. The British government sent William Drummond Jervois, Assistant-Inspector General of Fortifications, to draw up an acceptable plan of defence.

His report, submitted in February 1864, exposed the weakness of the Canadian defence system. It was so decrepit that it would never withstand an enemy so much superior, in both manpower and arms. Jervois established the impossibility of adequate defence in Canada West since it depended on naval superiority on the Great Lakes; this implied the widening of the canals. As a result, he preferred to concentrate defence efforts in Canada East, mainly in Montréal and Quebec City.

According to Jervois, the enemy's strategy would be to reach Montréal overland from Lake Champlain with military diversions on the Niagara frontier, the ultimate objective being the capture of Quebec City. The officer maintained that the city



6 In February 1864 William Francis Drummond Jervois proposed the construction of various defensive works in Canada East, including those at Point Lévy. This map shows both the proposed defence installations and the principal routes of maritime and railway communication at that period.
Sketch: F. Pellerin, Canadian Parks Service, Quebec Region.

could be defended until help arrived from Europe, on condition that existing positions were improved, and that its perimeter of defence were extended to the south shore.

Jervois was sure that the Americans would invade Canada. Time was short. Quebec City would be the last refuge for the British troops in case of retreat. He insisted that a chain of forts be built on the heights of Point Lévy to prevent an approach by rail on that shore. He added that the colony should contribute financially to all construction efforts.

The British officer recommended that the forts consist mainly of earthworks, in order to limit the costs and construction time. These fortifications, surrounded by dry moats or ditches protected by arched firing passages called caponiers, would combine protection from shelling and lodging for the garrison (casemates). In order to protect the forts from assault, armed masonry redoubts, located on the parade square behind the casemates, would be able to sweep the interior of the fort with their fire. A trench would link the various forts. It would be protected by a terreplein (built from the excavation soil).

The armaments of the forts would consist of new rifled cannons; some conventional heavy-calibre guns would be added to flatten the enemy trenches in case of siege. Small howitzers and conventional low-calibre guns would arm the redoubts for the internal surveillance of the forts.

Jervois estimated that the cost of the work in Quebec City (including Point Lévy) and Montréal would be about 750 000 pounds, a little less than half the cost of the Gordon Commission's proposal. London hesitated to take on such an onerous program until the Canadian parliament made known its intentions. The mother country showed a special interest in Quebec City, because its geographic position ensured direct communication with the British fleet. But the people of Canada West had very different ideas. Once the Jervois Report was made public,

they protested that their needs had been neglected. Consequently, Jervois reconsidered the problem in the autumn of 1864.

His second report coincided with the Americans' violation of the Rush-Bagot Treaty of 1817 and their questioning of the Reciprocity Treaty of 1854, events which alarmed the Canadian parliamentarians. In the first treaty, England and the United States had agreed to limit the number of warships on the Great Lakes. In the second, the two countries had mutually agreed on customs exemptions on certain products. This context now had to be taken into account by Jervois.

At this point, the Canadian government seemed willing to assume part of the costs. It planned to fit out a naval base in Kingston to support the warships on the Great Lakes. Jervois recommended its construction and also proposed widening the canals leading to Lake Ontario as well as defensive works in Toronto and Montréal. All this reassured the residents of Canada West.

To ensure the safety of Quebec City remained the prime necessity in Jervois' eyes. On the north shore, there was nothing to fear as long as Montréal did not fall; but the possibility remained of an attack by railroad on the south shore. Established on Point Lévy, the enemy would control the port. The report therefore advocated the construction of permanent defensive works:

> *This position, which is about three miles long, should be occupied by detached works; and within, on the banks of the river, some heavy guns should be placed to cooperate with the batteries of the town [Quebec] in the defence of the channel.*[1]

Originally, Jervois' project comprised five forts and several batteries (aside from those on the shore), placed in a circle enclosing Point Lévy. Now he proposed four, three on the circle and the fourth to the north of the central fort.

7 The network of the four forts proposed by Jervois in a plan of 1865. Their identical form is to be noted, as well as the position of the fourth fort in relation to the three others. However, once the Citadel had its new armaments and could control the river Fort #4 was no longer needed and plans for building it were cancelled.
H. Sitwell, 1864, National Archives of Canada, C-97316.

The costs of this new proposal by Jervois amounted to 1 750 000 pounds ($8 750 000) exclusive of the maintenance of the 140,000 extra men needed for defence. The question degenerated into a problem of financial responsibility. The Canadian parliament demanded that London build and arm the forts at Point Lévy. The Canadian government would vote a sum of 200 000 pounds (one million dollars) to raise militia regiments and to meet construction costs in Montréal. On the other hand, it wanted England to guarantee this amount raised by loans. At one stroke, Canada freed herself from all financial responsibility for the proposed construction in Kingston and Toronto. Great Britain, in the grip of serious economic difficulties, refused to guarantee the loan, but nevertheless voted the necessary credits for the constructions on Point Lévy. It would cost the English taxpayers 200 000 pounds (one million dollars).

The Gordon and Jervois Reports agreed that the port of Quebec City was the key to Canada's defensive system as it ensured direct communication with England. In case of a Canadian-American war, the heights of Point Lévy had to be fortified, in order to resist the enemy as long as possible. It was a matter of constructing, not a continuous rampart like the one in the Upper Town of Quebec City but rather a chain of forts, about 1800 metres (one mile) from one another, which could therefore protect each other with their artillery.

Several reasons justify this new type of construction. First it would protect a greater area. To build a continuous rampart over such a great distance would cost a great deal more; and, if the enemy breached the rampart, the defence would fail. The detached forts had the advantage that, if one fell to the enemy, the others could continue the defence. In 1859, Jervois had been Secretary of the Defence Committee of the United Kingdom. This Committee had analyzed very carefully the question of the English ports' defence and recommended the use of detached forts. So it is not surprising that Jervois suggested this type of fortification.

But why stretch the area of defence right to the south bank? Certainly the Americans must be warded off. But it must be added that artillery was being updated: the rifled cannon allowed much greater precision in firing with a much longer range. Since the Americans were equipped with this type of cannon, Jervois recommended that the forts be armed with this modern artillery in order to hold back the enemy as far as possible from the forts and the port.

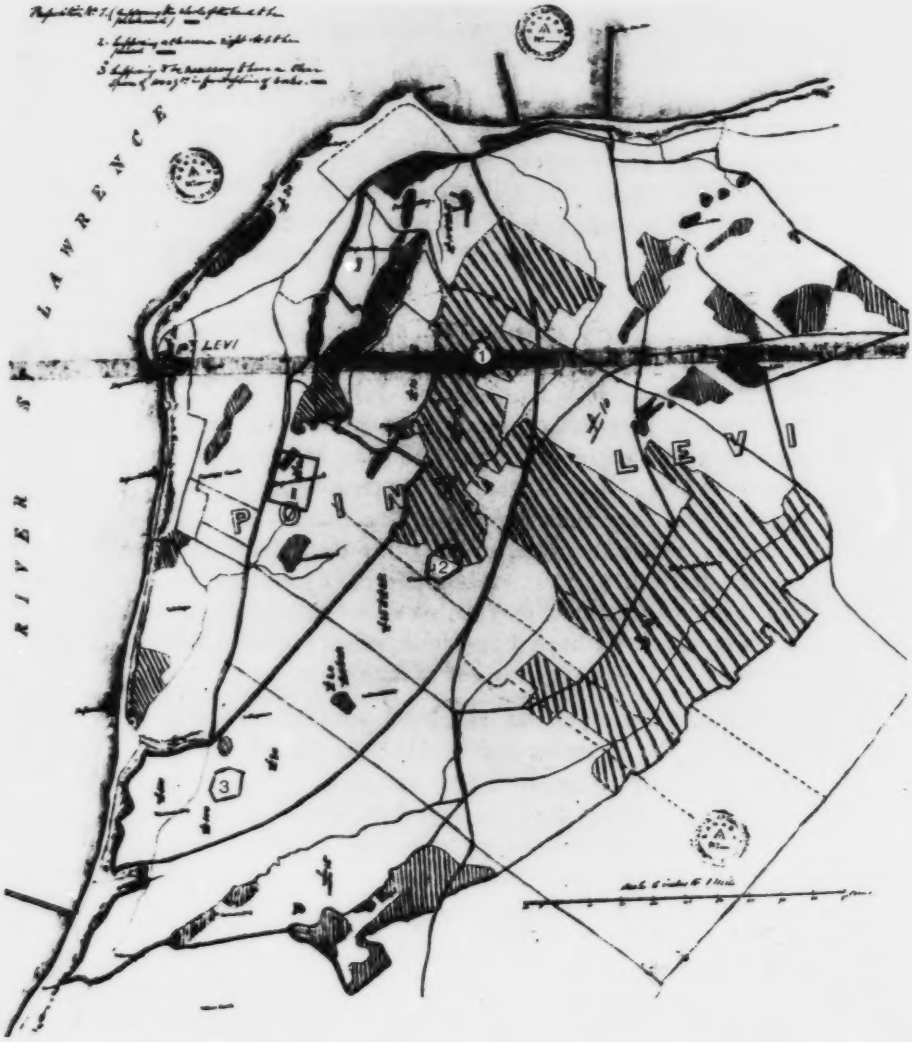
Ancillary Building

As on all building sites, preliminary measures were necessary. Before starting the construction itself, the required land had to be purchased and a survey completed. Since there would be heavy traffic between Quebec City and Point Lévy, a wharf had to be built on the south shore, new roads had to be laid out, and shelter for the military engineers and the workforce had to be provided.

In May 1864, Lt. H.L. Sitwell and Sgt. Thomas Watson of the Royal Engineers landed in Quebec City. With a team of 13 soldiers they carried out a topographic survey of the region to determine the precise location of the future forts. At the end of September, the engineers returned to their Montréal barracks, their work completed. Sitwell and his team chose to place the four forts on geographical features. The future Fort #1 (these forts never received any names other than their numbers) would rise on a hill called Mount Pleasant; Forts #2 and #4, in an area named Spruce Cliff, and Fort #3, on a spot called Lemure. The survey team also outlined the positions of the proposed batteries between Fort #1 and the riverbank to the east.

Once this first stage was completed, the lands had to be expropriated. The estimated sites would be in the shape of an arc about 300 metres wide (1000 feet) and about 4 kilometres (2.5 miles) long. First, the land needed immediately for construction had to be acquired; then the bordering properties in order to detach the forts. Finally, they had to either expropriate the property in the firing zone or convince the owners to donate, for a consideration, an easement in order to leave this area clear of all construction.

To proceed with these expropriations, the Royal Engineers relied on the Imperial Defence Act of 1860 which stipulated that work could start 14 days after delivery of the expropriation notice to the property owner. So that there would be no ambiguity,

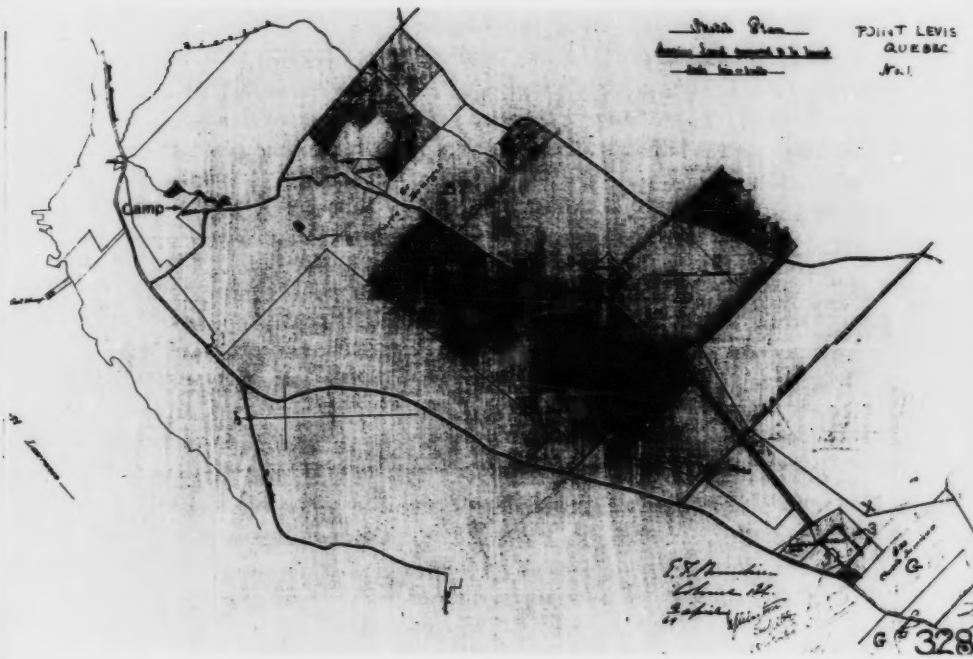


8 **The bold line defines the lands expropriated for military purposes during construction of Point Lévy's forts. These lands form an arc-shaped corridor, which widens north of Fort #1 to include the Royal Engineers' camp.**
H. Hassard, 1865, National Archives of Canada, C-97319.

the Royal Engineers asked the Attorney-General of Canada, George-Étienne Cartier, for his opinion on the legality of this procedure. Cartier advised that if this law were ever contested, the Consolidated Statutes of Canada gave them the necessary authority. Thus the Royal Engineers decided to send the notices of expropriation to the owners by virtue of chapter 36 of the Consolidated Statutes.

The compensation process took place in the following fashion: two evaluators, one French-speaking and one English-speaking, would offer the owners a price. Because of the incontestable legal foundation of their action, the British military usually offered less than the market value. If this was contested, two legal counsellors, again French-speaking and English-speaking, would decide the lawsuit in favour of the government. The legal counsel, Wickstead, was responsible for sending the bills to the Royal Engineers. The latter submitted them to the office of the Military Secretary and finally, the Quarter Master General's Branch, the only one with the power to settle the bills, would finally pay them.

Some owners and even Wickstead complained about the slowness of payment, but the clerical section of the army was a top-heavy piece of bureaucratic machinery. Thus a bill sent by Wickstead from Quebec City had to go to Montréal, be returned to Quebec City for approval, and go again to Montréal, after which payment would be made! Not only did the owner have his buildings and land undervalued, but he also had to bear the slow pace of officialdom. The small six percent interest on arrears offered little compensation to those who were waiting for their money in order to relocate. The owners and the military both lost, since the latter saw their land budget encumbered because of this slowness. The only ones to profit were the evaluators, who received 0.5 percent of the prices they set. This made Commanding Officer Gallwey of the Royal Engineers of Quebec City say that it would perhaps be better if the military took over this role.



9 The army rented much of the land it had expropriated. Rents varied according to the nature of the soil, and could at times be very high. *E.F. Bourchier, 1868, National Archives of Canada, C-97316.*

If the military felt that the expropriations exhausted their budget, the dispossessed owners had their own complaints about the slowness of compensation and the inadequacy of the prices offered. About 15 of them demanded arbitration. A petition was sent to Joseph-Goderic Blanchet, Member of Parliament for the county of Lévis, but nothing was done about the matter.

Before serving the notices of expropriation, the British military had estimated that it would cost them at the most 50 000 pounds if all the lands were bought, and at the least 30 500 pounds if they made do with the minimum of land required. By the end of 1865, the expropriations had already cost 30 000 pounds. It was felt that still another 8200 pounds would have to be spent to acquire the rest of the land. The total costs could reach 45 700 pounds, including new properties, honorariums for the evaluators, and interest. Even though the costs came within the estimated budget, the military really tried to economize by not expropriating land where easements would suffice.

Despite their willingness to slow down the pace of expropriation, it seemed that the military had been too greedy for land. From the end of November 1865 the administration recommended that all the acquired land that was not being used (or would not be used) during construction should be rented for pasture. In 1866, about 20 of the properties offered for rent drew only three bids for five of them. Was this an indication of the resentment of the inhabitants of Point Lévy? Or of their lack of money, in view that one of the conditions was that the rent must be paid in advance? Or were the fields not very good for pasture? Or were the military reserving a right of way? Whatever the reason, there were very few takers.

Once the expropriations were completed, a landing stage had to be built on the south shore. The military hesitated between two options: to construct a wharf with a military workforce or to contract to a private company. The first solution, although less costly, was inconvenient because it monopolized a group of soldiers working elsewhere. Since the Duncan Patton Company

10 Land expropriated by the military (heavy outline) including those of the Engineers' camp and the pier.
H. Sitwell, 1867, National Archives of Canada, C-97315.

was offering to build the wharf for 25 percent less than the Royal Engineers' estimate, the second solution was decided upon. It would cost 2800 pounds ($14,000) for a pier 60 metres long (200 feet) by 19 metres wide (62.5 feet) and 9 metres high (30 feet). The cost was relatively low because the company sawmills were nearby, thus lowering transportation costs.

The project started in June 1865. At the end of October, all that remained was to cover the wharf with planks. At this point, Duncan Patton's troubles began! He had undertaken the job on the basis of a verbal agreement with the superintendent of the Royal Engineers of Point Lévy, Captain Akers. When his request for payment was presented to the Quarter Master General's Branch, he was told that the job was unfinished. Patton explained that the plan he himself had drawn up and followed called only for building the structure and not for covering it. It was a waste of breath.

To solve this deadlock and also to cover up his own mistake, Akers proposed that the dock should be lengthened to 140 metres (450 feet) and then covered. Patton had no choice but to agree to this change in his contract since the Quarter Master General's Branch had a mortgage on his company properties and was holding back 500 pounds ($2500) on the cost of the work; he himself had had to provide two sureties. All in all, the amount claimed by Patton equalled the amount that he had put down as guaranty. The episode of the Indian Bay pier, which was finally completed in 1866, was only the first of the Royal Engineers' mishaps in their dealings with contractors.

The steps taken to this point were those advocated by Jervois at the beginning of April 1865. The next stage was to ensure communications between the shore, the forts, and the Engineers' camp. All these works, of course, were going on at the same time. From the beginning of June 1865 the military were constructing a road from the pier to the site of Fort #1. They even considered a sloping installation (a type of conveyor) run by a steam engine, but in order to control expenses this was aban-

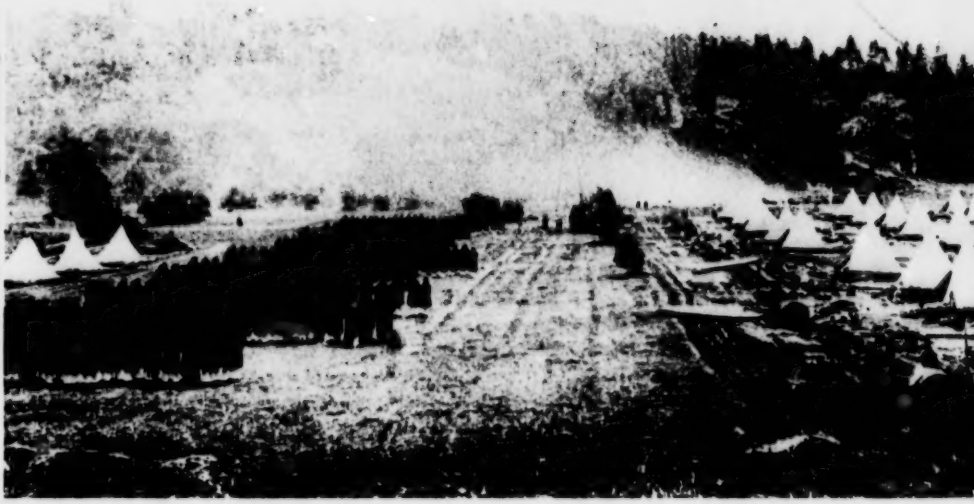
doned. The military avoided making a parallel network of roads, and tried to link the new roads with existing ones.

The use of existing roads by the military and their suppliers created a misunderstanding that required two years of negotiations with the Quebec South Shore Turnpike Trust, which was in charge of Point Lévy's roads and collected tolls on them. The military set themselves firmly against the obstinacy of the tax-collectors, who demanded payment not only by the officers and soldiers but also by the suppliers. According to the Solicitor-General of Canada, Hector-Louis Langevin, neither the military nor their suppliers had to pay. This problem was finally resolved in 1866 to the army's advantage but without reimbursement of the sums already paid. The turnpike episode had caused unforeseen expense for the military and the suppliers.

At the same time as the road system was being built, the military undertook the construction of a camp to lodge the Royal Engineers and their workers. This camp would take the form of a real military town. In mid-April 1865 cost estimates for a barracks for 500 men were obtained. Again, there was hesitation over awarding a contract or building under state control. So when the soldiers arrived to construct the fort, their lodgings were not ready and they had to bivouac. Apart from the soldiers' tents, the encampment would include those of the officers and the married soldiers, one for the medical officer, one for the officers' servants, another for food storage, as well as two work tents for the tailors and the shoemakers.

Although London would have preferred the awarding of a contract, the military authorities in the colony decided to have the barracks built by soldiers. In the intervening period, they had updated their needs and decided to construct not only one but several barracks, as well as warehouses. By February 1866, the camp contained 21 buildings and several others were added later. Without going through the whole list, we may mention three barracks for soldiers and three for officers, warehouses for food and equipment, stables, fire station, canteen, workshops for

11 **The Royal Engineers' camp at Point Lévy.**
V.G. Clayton, 1870, National Archives of Canada, C-37287.



12 The camp of the 78th Regiment during rollcall. This Scottish regiment, the "Queen's Own Highlanders," is one of those quartered at Point Lévy during the construction of Fort #1.
A. Murray Album, ca. 1868, Queen's Own Highlanders Museum, Glasgow.

13 Officers barracks in the Royal Engineers' camp. In the winter, snow shovelling was added to the other daily tasks of the privates.
Photograph, origin unknown, ca. 1869, National Archives of Canada, C-117634.

carpenters, tailors and stone-masons, forge, school, hospital, two messes, kitchen and naturally, several latrines. The married soldiers and officers lived with their families in the expropriated houses.

It must be noted that this camp housed only the officers and soldiers of two companies of the Royal Engineers at Point Lévy, about 180 men in 1865. The soldiers from other regiments who were used as labourers could work for no more than four months a year because army regulations only allowed them to bivouac from 1 June to the end of September.

Some indications give a partial picture of the soldiers' camp life at that time. When the construction of the barracks was about to begin, a debate arose in the army about the allocation of space in the barracks. It was claimed that a soldier generally needed about 13 cubic metres (460 cubic feet) taking into account an arbitrary height of 2.25 metres (7.5 feet), and that this should be increased to 17 cubic metres (600 cubic feet) in order to prevent the spread of illness. However, the soldier at Point Lévy had at best 12 cubic metres (450 cubic feet), and most had to make do with 8 cubic metres (300 cubic feet). Although the army had modified its standards in the 19th century, it seems that soldiers continued to live in the same cheek by jowl conditions that were characteristic of barracks. On the other hand, the officers and their servants lived in quarters that were three times bigger, about 38 cubic metres (1350 cubic feet), divided into two rooms. This distinction between officers and soldiers was not an exception in the Point Lévy camp; it is characteristic of military life in every epoch and in every country.

However, this situation did not seem to be to the advantage of the officers in winter, because according to Captain Malcolm, it was very cold in their barracks. At night when the stove fires went out water froze in the basins. The wind blew snow in through every crack. Although the walls of Canadian houses were from 30 to 38 cm thick (12 to 15 inches), those of the officers' barracks, which were filled with sawdust, measured at

most several centimetres. The engineers said that their lodgings were ice-houses! The soldiers, piled one on top of the other in their quarters, didn't seem to suffer from the cold, but their crowding contributed to the spread of sickness. As a result, at the end of 1865, epidemics of scarlet fever and smallpox forced the military to build an isolation ward adjoining the hospital. Few men were hospitalized because of work injuries. There is only one mention of a serious accident: two soldiers were wounded when cleaning out a hole for dynamite.

Social activities took place in the soldiers' canteen, in the officers' mess, or in the school, which served as the cultural centre. Religious services, conferences, plays, concerts and balls were held there, apart from being used to teach both the soldiers and their children. In fact, there were two types of teaching. A technical education was provided by a Royal Engineer to children over six years of age and to the soldiers. And, in what would correspond to our kindergarten, the little ones from two to six years of age would be looked after by two "teachers," themselves aged from eight to ten.

All in all, the Royal Engineers' camp in Point Lévy quite faithfully mirrors British army life in the middle of the 19th century. Although living conditions had improved slightly, they were still difficult. A comparison with civilian life at that time would be needed to appreciate the severity of military conditions.

Forts #2 and #3

If the military authorities seemed to hesitate between putting out a contract and constructing the camp barracks themselves, they had the same dilemma concerning the construction of the forts. London strongly suggested turning everything over to private business and even granting a single contract for the entire works. This solution seemed the most advantageous in the eyes of the British military authorities. At the beginning of July 1865, it seemed as if the colonial military men had accepted this point of view; a clause of the agreement signed by the contractors stipulated that the sum of 1250 pounds ($6250) for each of the forts must be held back from the contractors' fees until the works were finished. However, someone revised this decision. Commanding Officer Gallwey of the Royal Engineers at Quebec City wrote in 1867 that the local military administration had decided to build one of the forts by military manpower, in order to be able to compare costs.

It was finally decided that the military would build Fort #1, that Fort #2 and Fort #3 would be constructed by private contractors and that construction of Fort #4 would be cancelled. The construction of the forts became a way to compare the costs of each method — under government control and by contract. We must, therefore, think of the construction of the forts of Port Lévy being done in this spirit of rivalry.

Before the work was begun, Jervois had made two recommendations: the first, to ask for bids only from the largest contracting firms in Canada; the second, to pay, not for the completed work, but for each part separately. This method would help control the costs and the quality of the works built.

The two suggestions were accepted. Commander Gallwey emphasized that he had sent invitations only to certain "qualified" contractors. Most of them were not from Quebec City. Some of the Quebec City contractors, probably without their

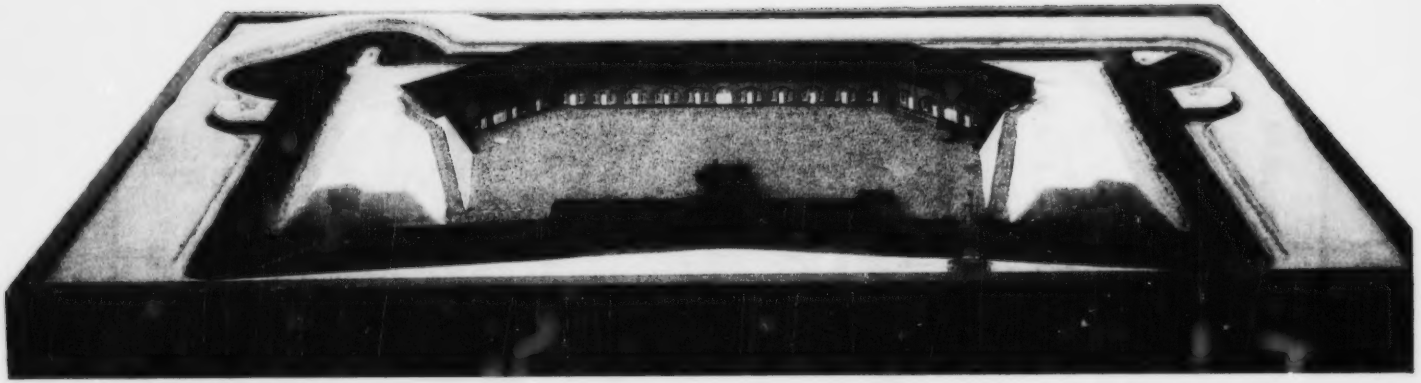
knowledge, were rejected at the beginning, perhaps due to the poor quality of their earlier work, perhaps because they did not have the financial means to carry out such an undertaking.

The Royal Engineers received bids from 23 builders only seven of whom were from Quebec City; none were French-speaking. The bids of the Quebec City contractors varied from five percent (Joseph Archer) to about 54 percent (A. Peebles) above the costs estimated by the military engineers. Although Archer's figures closely approached the estimate, his bid could not compete with that of the brothers James and George Worthington, respectively from Toronto and Hamilton, at 16 percent below the estimate.

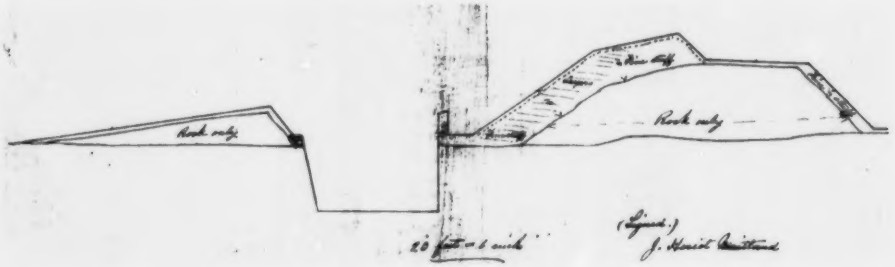
The Worthington brothers, who normally did not seem to work together, promised to take their men and equipment to Point Lévy as soon as possible. They claimed to have completed contracts for the Royal Engineers in Canada West and to have been associates in the construction of the "Great Western Rail Road" and the "Northern Rail Road." As financial guarantee, James Worthington named the Bank of Toronto, and his brother, the Bank of Montreal in Hamilton. On 11 July 1865, once the usual inquiry was completed, the Worthington brothers signed their contract.

One of the contract's clauses stipulated that the War Department would furnish the building stone and certain tools. These would come from the Hugh Hatch Company of Quebec City, which had also presented a bid for the construction of the forts. The Worthington brothers would have some materials, such as brick, made on the site or they would get them from various suppliers.

The work on Fort #2 began 24 July 1865 and on Fort #3 on 7 August. Earlier, the military engineers had gone ahead with marking the boundaries of the forts on the ground, and had even dug exploratory trenches to determine the nature of the soil. The trenches showed that there was only about 45 cm (1.5 feet) of



14 Model of Fort #3: note its rectangular shape and the earth rampart on three sides. The fort is now a factory for concrete.
Museum of the Royal 22nd Regiment, Citadel of Quebec City; photo: Canadian Parks Service.



15 Fort #2: outline of the glacis (left), of the rampart (right), and the ditch (centre). Since no casemate is shown, this can only be either the east or west side.
J. Heriot Maitland, ca. 1867, National Archives of Canada, C-117630.

soil on top of shale, with bedrock below. Therefore, it would be necessary to do a great deal of blasting to create the ditches.

Similar in shape, Fort #2 and Fort #3 had earthen ramparts on three sides with a masonry wall on the north side to close the quadrangle. The exterior slope of the earthworks was about 45 degrees. The south face extended into a gradual slope called a glacis while the terreplein enclosed the casemates or vaulted rooms destined to lodge the garrison. The slope of the rampart hid from the attackers a ditch a dozen metres wide (40 feet). Joined together by an underground passage at the ends of the casemates, two caponiers (vaulted dugouts) overlooked the ditch: one double (east side) and one single (west side).

The north face (the river side) did not have a rampart. Only a masonry wall separated the courtyard from the ditch. This wall, which had a door, didn't form a straight line but rather what the military engineers of the time called "the front line of fortification." Coming from the northeast and the northwest corners, two sections of the wall veered slightly towards the interior of the fort, and just before joining up, they formed a recess for a caponier.

This all adhered to the geometric and strategic norms adapted to the new armaments available at this time. The casemates hidden under the terreplein could each hold 12 men or more, each with at least 15 cubic metres (550 cubic feet) of space, just about the army's new norms. In all, the 15 casemates could shelter a garrison of approximately 170 men and their officers. Each of the forts occupied more than eight acres, about 32 000 square metres (344 000 square feet) without counting the glacis.

The first work consisted of clearing the sites and excavating the ditches by blasting. At the end of August 1865, 7650 cubic metres (10 000 cubic yards) of earth and rock had been extracted at Fort #2. The best rocks were put aside for the building. The rest of the rocks and the earth would serve as filler for the rampart and the glacis. The excavations were finished by the

beginning of October. The Worthington workers had moved more than 97000 cubic metres of rock (127 000 cubic yards). Construction of Fort #3 progressed as rapidly despite the two weeks delay before the start of work.

Although this first work-season passed without too many hitches, several situations and incidents were already straining the relationship between the contractors and the Royal Engineers. Work progressed at a steady pace, but the Worthington brothers complained about the slowness of the Royal Engineers in paying their bills. According to them, the military were not keeping their agreement. This was but the first of a long series of disagreements that would be settled mainly in favour of the contractors, to the detriment of the military budget.

One of the problems to arise had to do with the supply of rock. According to the contract, the army was to furnish the contractors with building stone. In August 1865, to fulfil this commitment, the Royal Engineers granted a contract to O'Connor & Davis of Quebec City. This company subcontracted to six others, one of these being the Worthington brothers. Several days later, O'Connor & Davis withdrew. With no other choice, the engineers called upon the Worthingtons to work a new quarry about four kilometres (2.5 miles) south of Fort #3, this at a price fixed by the government. The Worthingtons objected; since their contract did not call for supplying rock, they insisted on the question going to arbitration, as stipulated in the contract. By way of compromise, they proposed to take charge of quarrying the rock if the military would construct a tramway between the quarry and Fort #3. The military felt trapped and refused so they opted for a less onerous solution of calling for new bids. In mid-October, they signed a contract with the Nicholas Piton Company of Quebec City, owners of a rock quarry beside the road near Fort #3. This first important friction had nevertheless a happy ending!

Another situation provoked definite reactions on the part of the Worthingtons and caused even more upset among the mili-

tary men: architectural changes. From the beginning, the Royal Engineers proposed modifications, most of little consequence. However, there would be one which would affect the terms of the contract itself, bringing about the transfer of the supervisor of the Royal Engineers at Point Lévy, Captain Akers.

Among the modifications of lesser importance were the construction of an office, stables, and quarters for the military overseers near Fort #2. Although Akers had had these works approved by his superiors, it is evident that these buildings, not included in the contract, were built through the good will of the Worthington brothers without a preliminary agreement. Therefore the costs should have been borne by the military! The buildings were finished in August 1865, but in March 1866 the contractors had not yet been paid for them. The military judged their costs exorbitant, which evidently contributed to the tension between the two sides. The situation was repeated in connection with the architectural modifications to the forts themselves, such as the width of the underground passages or the emplacements of the cannon. These changes, needless to say, would entail additional expenditures.

Another time, the Royal Engineers, again on the recommendation of Captain Akers, asked the contractors to accept a change in the contract. It seemed innocuous at the time but had grave consequences for the subsequent relations between the two sides. What was the problem? Very simply to cut in half the distance over which the government had agreed to pay for the removal of earth and rock: the military wished to reduce the paid moving zone from 45 metres (50 yards) to 23 metres (25 yards). If the contractor was willing, the military would save a goodly amount in transport costs. Thus finished the first season of work on Fort #2 and Fort #3.

The winter did not entirely shut down the work site. The masons were busy cutting the stone furnished by the Piton Company, in readiness for the next season. The carpenters were making doors and windows for the casemates. These artisans

worked in sheds adjacent to the expropriated houses in which they lived. At the same time, the blacksmiths were repairing the tools.

In April 1866 activity resumed on the sites of the two forts. Scarcely a month later, the Worthingtons sent a note complaining about the poor quality of the stone supplied them. As they were putting in the foundations for the casemates, this defect slowed down the pace of the work. During all of 1866 the contractors continued to protest. But the military engineers continued to modify the plans. Sometimes the changes did not reach the contractors in time for a specified section because the military were redesigning as the work was progressing. In fact, it seems that the Royal Engineers had difficulty keeping up with the contractors. On the other hand, it can be argued that the latter were trying to raise their profits to the maximum and perhaps skimped in certain areas.

So it is not surprising that the Royal Engineers requested the contractors to demolish part of the recently built casemate wall. The alleged reason was that the specifications had not been followed. Such a gesture could only accentuate the tension. Work was continuing, but the contractors were not yet paid for the completed work since their bills were held up in the military administration's offices.

During 1866 two incidents happened noticeably altering relations between the military and the contractors. The first, commonplace and harmless, would leave its mark and add to the spirit of antagonism. The Worthingtons inquired if they could buy a cement mixer from the Royal Engineers. Before clinching the bargain they wanted to try it out. After several months of trial, the Worthingtons decided that the machine did not fulfil their needs and returned it to the military, who had not expected this. The quarrel grew. Reports poured in from both sides, each wishing to prove his point of view. Finally Charles Ford, the Commander-in-Chief of the Royal Engineers in Canada had to settle the question once and for all. He accepted the Worthing-

16 Casemates of Fort #3 after its conversion into a cement works.
Photo: Canadian Parks Service, Engineering and Architecture, 119/00/PR.6 (1).

tons' story despite the weight of the file prepared by his subalterns.

How to explain this decision? Ford perhaps hoped to ease the tension, because he had to cope with another more serious dispute. Unhappy with the lack of speed in the payment of their bills and irritated by the change imposed in reckoning the charges for the transport of earth and rock, the Worthingtons again demanded arbitration. In monetary terms, the application of the new norm of 23 metres instead of 45 made a stake of 14 000 pounds or $70 000. The second construction season, which had seen the casemates of Fort #2 take shape, finished on this note.

The problem would not be resolved until September 1867, each party standing firm. In the meantime, work continued and the exchanges between the military and the contractors were polite but cool. When the arbitrators decided in favour of the contractors on every point in dispute, the already strained relations grew still more acrimonious. Some months later, the Commanding Officer of the Royal Engineers at Quebec City protested that the Worthingtons continued to make their masons work after the frost. He advised the Worthingtons that he would not allow any other interpretation of the contract, and that they must respect all its conditions to the letter from now on. Commanding Officer Gallwey's tone showed the frustration of the Royal Engineers: "so must you expect to be dealt with [?] regard to every clause of the Term of Contract."[2]

The relations would remain strained to the very end of the work. Nevertheless work progressed very rapidly during 1868, at such a pace that it was completed at the end of the year. This accelerated rhythm had repercussions on the budget — not only were the sums provided for 1868-69 exhausted, but another 18 000 pounds had to be found. The Commander-in-Chief Charles Ford, called upon to justify this state of affairs, fell back upon the exceptionally mild temperature that had permitted much more work to be completed than expected. There was certainly no question of demanding that the Worthingtons slow down the

17 The north face of Fort #2: the wall, the entry and several casemates in the south rampart. At the left can be seen the ditch and the rampart on the east side.
*W.O. Carlisle, **Canadian Illustrated News**, 1873 (Vol. 5, No. 20), p. 339.*

work, especially after the recent court decision in their favour. The English authorities, not satisfied with these explanations, recalled Ford to England.

The contractors, following their exceptional season of 1868, expected to finish the two forts towards 1 July 1869 except for the bridges and the entry doors, because the Engineers had not yet made known their intentions on these. Since the Worthingtons had obtained a contract for the construction of a trunk line of the Inter-colonial Railway, they asked to be relieved of their responsibility in order to fulfil this new contract, and this request was granted.

So the Worthington brothers had built only two of the three forts on Point Lévy. The construction of the fourth had been abandoned at the very beginning of the work due to lack of funds. Copying the military exercise, one must now compare the construction of Fort #1 with that of the two others, to determine if it would cost less to build with state supervision or by contract. Of course, the military supervisors and the contractors worked side by side in a spirit of rivalry.

Even before the call for bids, the military authorities in England suggested that all construction be entrusted to private enterprise. The colonial military authorities decided otherwise. Besides the avowed aim of financial order, what were the colonial military men trying to prove?

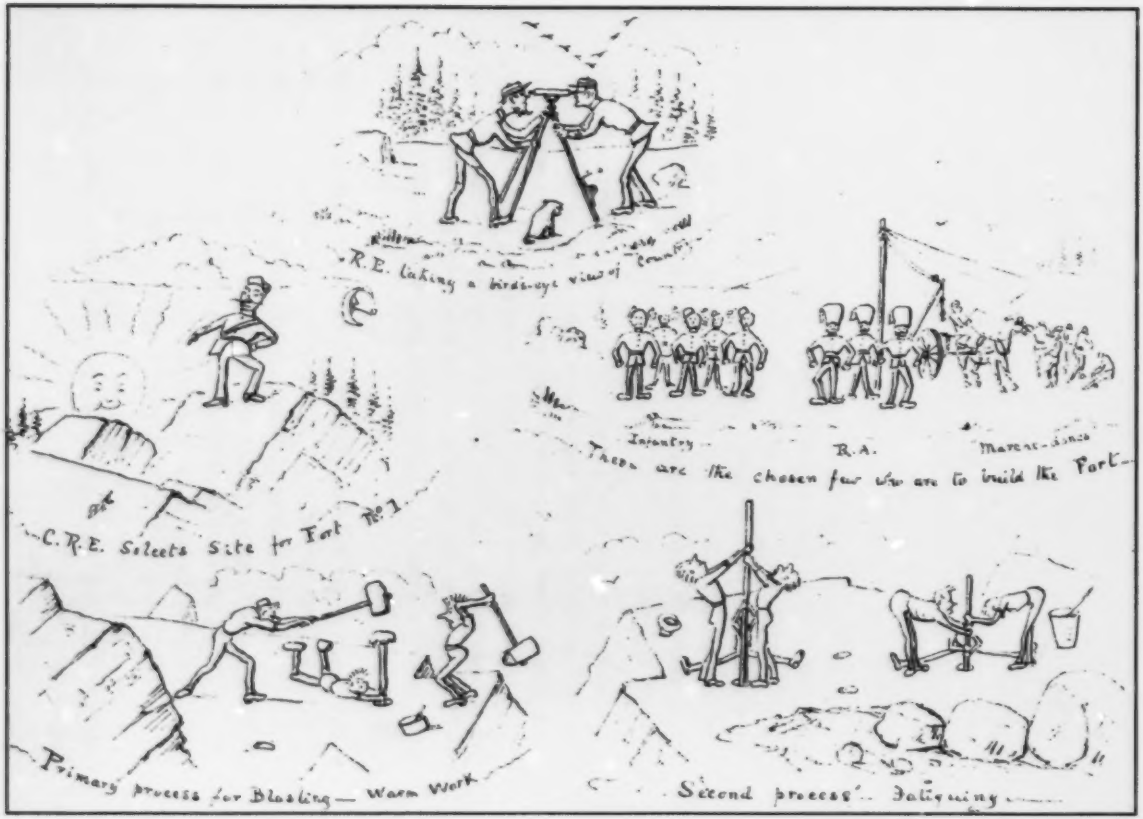
Fort #1

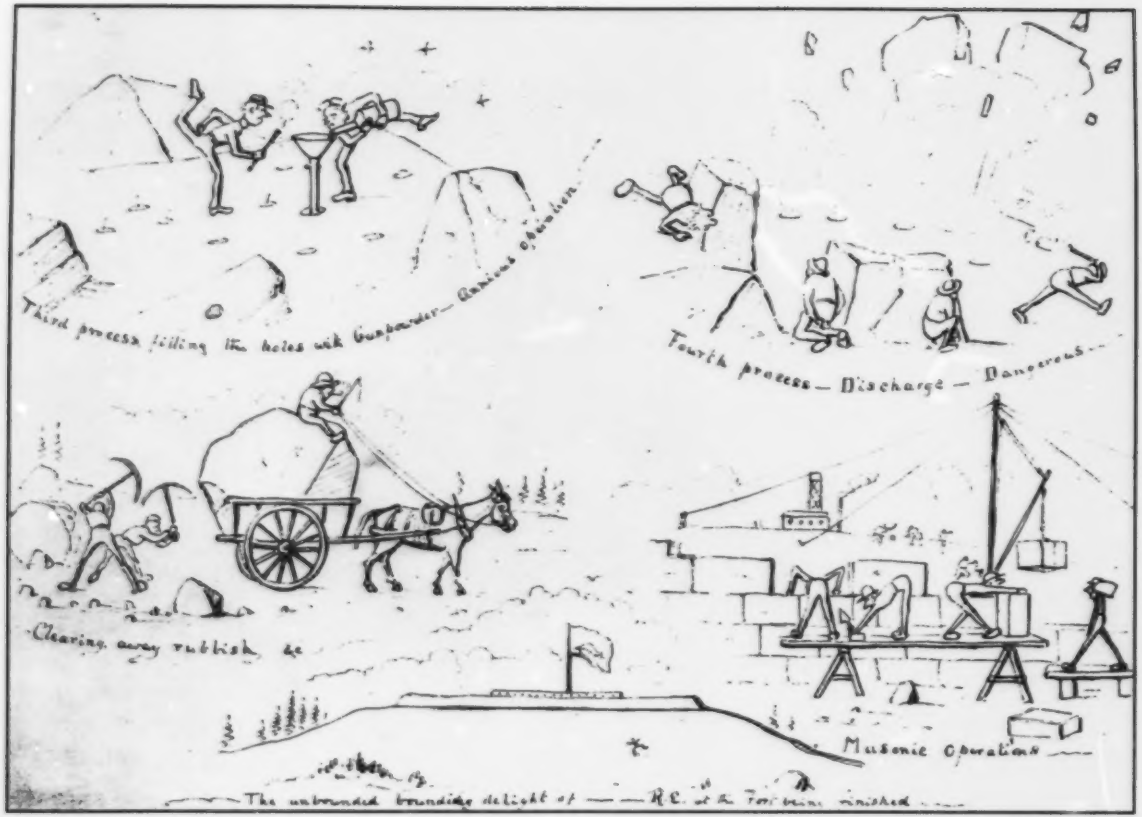
The military men erected the fort and at the same time also put up the Engineers' camp. Work on Fort #1 started at the beginning of June 1865. The first job entailed clearing the land, while several teams were opening roads leading up from the steep riverbank. In fact, the military labourers cleared and stumped by machine nearly 73 hectares (180 acres) of land, which translates into 5 hectares (12 acres) of cordwood!

At the beginning of September digging began. Four months later, the depth of the ditch had reached 3 metres (10 feet). During this first season, the military progressed at perceptibly the same pace as the Worthington brothers' labourers, even though they worked only five days a week compared to the six worked by the civilians. They planned to begin the casemates during the summer of 1866.

In order to speed up the work the military men spared no effort. A number of steam engines, ordered from England along with several from the United States, appeared on the work site. A system of wagons on rails that was powered by a stationary steam engine wound its way around the site of the fort. Here and there, soldiers of the Royal Artillery used winches, pumps and other heavy equipment. The work site began to resemble an anthill.

Despite all the latest equipment, witness to the technological advances of the period, work barely went forward as quickly as expected for two reasons — delays in the delivery of materials and the lack of expert tradesmen. On the subject of the materials, one must mention the casualness shown by the Piton Company in supplying stone for the three forts. It is also necessary to note the withdrawal of the James Dean Company, which had been retained to deliver timber, and its replacement by the E.O. Richard Company that was already providing brick, lime and cement.


R.E. taking a bird-eye view of
Infantry
R.A.
Marines
These are the chosen few who are to build the Fort
C.R.E. Selects Site for Fort No. 1
Primary process for Blasting — Warm Work
Second process — Fatiguing


Third process filling the holes with Gunpowder — Careful Operation
Fourth process — Discharge — Dangerous
Clearing away rubbish &c
Masonic Operations

18 a and b Humorous account of the principal stages of Fort #1's construction, from the survey to placing the stones.

*W.O. Carlisle and C.B. Martindale, **Recollections of Canada**, London, Chapman & Hall, 1873, p. 24-25.*

19 Fort #1: a row of casemates with their brick vaults.
Photo: J. Beardsell, Canadian Parks Service, Quebec Region, 1990, 119/00/PR-6/S-343.

This lack of materials did not, however, hamper activities during the winter of 1865-66. The carpenters were busy finishing the buildings in the Engineers' camp, preparing sleepers for the rail system and even building windlasses. The masons and the bricklayers were setting up the boilers and ovens in the camp kitchen, digging pits and drains. The miners continued to excavate the fort's ditches. The good rocks were sent on sledges to the camp, where the masons shaped them into cornerstones of all sorts and into stair steps.

It was only during the course of 1866 that delays in the delivery of the material and the lack of manpower became very evident. The Richard Company failed in its commitment to deliver brick (of which, the military claimed, only five to six percent was useable), cement (both Rosendale and Portland), lime, and wood. The Bellew Company did not meet the terms of its contract for hardware. The military men found themselves forced to produce their own lime on the site. However, this unexpected development enabled them to adapt the pace of their work to that of the masons, who were slowed down by the wretched quality of the stone furnished by Nicholas Piton. Contrary to expectations and military specifications, this stone needed a great deal of shaping.

The problem of supplies was added to one of the military's main worries: ensuring that they had enough skilled labourers. As well as two companies of tradesmen and the Royal Engineers, there were seven companies of the 30th Infantry Regiment on the work site of Fort #1 during 1866. Gallwey, the Commanding Officer of the Royal Engineers at Quebec City, indicated that there were 530 soldiers at Point Lévy. Of this number, only 400 worked on the fort, since the others went about their usual military duties of mounting guard, fatigue duty, and annual musketry training. However, this manpower proved totally insufficient. According to Gallwey: "We are badly off for builders at #1 Fort. Would the Major Gen[era]l sanction the detaching of such masons, stonecutters and brick layers as may be

found in the regiments at Montreal?"[3] He asked for 800 workers.

It was even suggested that military men under arrest should be put to work to alleviate the chronic lack of workmen. A breakdown of the trades of the 180 artisans in the two companies of the Engineers confirmed the rarity of skilled tradesmen in construction. There were 49 carpenters, 23 masons, 1 stone cutter, 2 quarrymen, 17 bricklayers and as many miners. Thus, there were barely 60 stone and brick workers and about 50 carpenters. The 70 other men were divided between 18 different trades from painters, shoemakers and saddlers to blacksmiths and tailors.

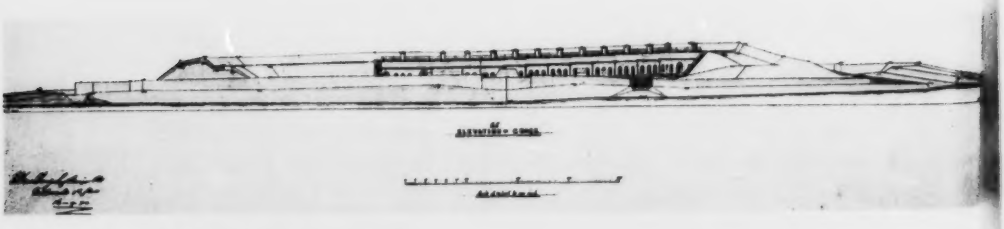
On the other hand, the competence of these soldiers must be questioned since a tailor could be "promoted" to stone cutter or mason; and a blacksmith and a carpenter could become miners, depending upon the needs of the moment. So it is not surprising to find that the recruiting of stone cutters and masons extended in 1867 to all the regiments in Canada and not only to those in Montréal. The situation became so grave that Superintendent Akers wrote "Should there be no means of testing their actual workmanship, it may be ascertained by questioning them whether they know anything about their trades!"[4] Despite the haphazard nature of this process, the hoped-for results did not materialize. Masons and stoneworkers whose performance would have theoretically been considered inadequate were hired anyway! As a last resort, the military leaders decided to hire civilian masons who earned three times what was paid to the soldiers. This solution distressed the Worthington brothers, who maintained that they alone could hire civilian personnel. Moreover, this was one of the four points of litigation submitted to the arbitration committee. Although the case was decided in favour of the contractors, the military continued to hire about a dozen civilian masons, drawn from the ranks of Worthington employees.

Called upon to explain the slowness of work on Fort #1, the Commander-in-Chief of the Royal Engineers in Canada, Charles Ford, gave nine reasons, the most important of which was the lack of military masons. To this was added the four-month work season for military personnel instead of six for civilians; a five-day week instead of six (90 days compared with 160), and the fact that the army workmen had to carry out their usual military duties. Moreover, according to Ford, only good artisans could work the available stone. He bluntly said that the military men lacked competence in this area. In the circumstances, the picture described almost becomes a confession of helplessness....

The scarcity of manpower was felt until the works were completed. The problem could not have been solved even if a company of army workers could have been raised from all the regiments stationed in Canada and they had been freed of all other regular duties. In any case, the work continued with insufficient workers, despite various incidents, such as the fire in the shed used for the steam engines. In November 1871, the last British troops finally left Quebec City, and Fort #1 was still not finished. The last works were carried out in 1872, when the Royal Engineers signed a contract with Nicholas Piton. In October 1872, the British Army officially turned over the finished Fort #1 to the government of the Dominion of Canada.

Fort #1 at Point Lévy differed from the two others, not only because it had been built by a military workforce, but also by its shape. It formed an asymmetrical pentagon whose two longest sides faced southwest in the direction of Fort #2. This outline, defined like that of the two other forts in accordance with the accepted geometric standards, allowed for a heavier artillery barrage in case the enemy occupied Fort #2. In terms of its arrangement, the same sort of structures was found there as in Fort #2 and Fort #3, 12 casemates capable of housing a garrison of 144 soldiers. At each of the three angles formed by the junction of the walls in front of (to the south of) the fort, underground passages allowed the men to go down from the

20 Aerial photo of Fort #1 taken in 1949.
Photograph in the files of the Canadian Parks Service, Engineering & Architecture, 119/00/PR.6 (1).



21 Fort #1: the casemates.
J. Snelling, 1872, National Archives of Canada, C-6285, detail.

casemates to the caponiers in the ditch. There was another caponier at the back near the entrance door. The entries to the three forts were similar: a winch could pull back a bridge on rails. As in the case of the heavy equipment, these winches came from England. However, the military installed them, thus taking over from the Worthington brothers for this job.

Is it possible to decide who, the contractors or the military, came out better? Upon first examination it seems that the military were dragging their feet. Nearly three years passed between the end of work on Fort #2 and Fort #3 and that of Fort #1. However, one must question this lapse of time because, as Commanding Officer Ford mentioned, the civilian workforce worked nearly 70 days more during a year, which almost makes up for the gap in this case. Therefore, the delay was not as great as the dates seem to suggest. To begin with, even though the race seemed unequal in terms of time, we must not stop there but rather consider the financial question, a much more worrying problem for the military authorities.

At first glance, there seems to be no difference from a financial point of view. It cost 57 896 pounds ($289 500), for Fort #2 and 58 909 pounds ($294 500) for Fort #3; while the total expenditures for Fort #1 amounted to 59 762 pounds ($299 000), about $9500 or three percent more than Fort #2. This negligible difference could have been caused by many factors, notably the nature of the soil. However, we would have expected much lower military costs due to the savings in wages, since their labourers earned three times less than the civilian workers. These savings were not possible, because the lack of skilled and competent workers in the army forced the military to hire still more soldiers and even civilian workers. Besides, the total costs for Fort #1 covered only materials, machinery and wages, but not the cost of housing, feeding and clothing the soldiers, since these expenses were the responsibility of a different branch of the army. On the opposite side, the Worthington contractors had no worries about additional expenses, because their workers

22 Fort #1: the bridge rolling on rails.
Photo: J. Beardsell, Canadian Parks Service, Quebec Region, 1990, 119/00/PR-6/S-344.

paid for food and lodging out of their wages. In reality, the building of Fort #1 cost more than the 60 000 pounds ($299 000) shown in the account books.

The military always had to control and even reduce costs! This age-old worry obviously made the Royal Engineers choose the lowest bid. The following illustration provides a glimpse into how the military mind worked at that time.

At the beginning, when the Royal Engineers awarded a contract for the supply of timber to the James Dean Company and it withdrew, the contract then devolved onto the second-best offer, which meant higher costs. Three years later, when the contract expired, the Royal Engineers thought of taking the company to court to recover the additional expenditures. However, they realized that their cause would be difficult to uphold legally, and that in court the jury "drawn probably from the same class of life as that to which the defendant belongs"[5] would probably be biased in favour of the accused.

If there were any losers in the story of the military constructions on Point Lévy, they are to be found among the French-speaking inhabitants of the region, be they farmers, skilled workers, labourers or even contractors. Those whose lands were expropriated were given arbitrary payments that hardly compensated them for the drawbacks: some lost their harvest, some their livestock; some settled down again nearby, others moved away.

As for employment, Fort #1 created very few openings for the civilian craftsmen and labourers — barely 12 masons and stone cutters were hired, and these came from the Worthington workforce. The sites of Fort #2 and Fort #3 were not much better since the contractor moved in with a workforce hired elsewhere.

The construction of the Point Lévy forts brought a few contracts to the area's entrepreneurs, such as Hatch, Piton, Bellew, Patton and Dean. However, it is difficult to evaluate their con-

tribution, save to mention that Piton signed the largest contract, since his quarries ensured several dozen jobs to the quarrymen and carters of the region. Besides, the provision of building materials did not necessarily favour local suppliers. Heavy machinery came from England or the United States. Even though Hugh Hatch supplied pickaxes, mattocks, wheelbarrows, hammers and other tools, the cost of such equipment represented only about 10 percent of the costs for the first year and barely two percent of the total costs over the first two years. We should emphasize that all the suppliers were English-speaking, except for E.O. Richard. However, his contract was cut short under the pretext that his supplies never reached the worksite on time. This was entirely a pretext — how else explain that no sanctions were taken against the Piton Company which did not entirely honour the terms of its contract? Piton, although his name sounded French, was not francophone; he came from the Channel Islands. A comment from *Le Canadien* deserves to be quoted: "les Canadiens français, d'après ce qui se passe, seront loin d'être favorisés dans ces travaux de fortifications."[6] ["With what's happening, French Canadians are far from being favoured for work on the fortifications."] At the very outset of the work, that reporter noted a reality that would be evident throughout the construction period, a reality however that existed long before the forts on Point Lévy. French-speaking labourers had not been hired to build or repair military buildings in Quebec City. Point Lévy could not be an exception, especially when we run into a mentality like that of Commanding Officer Gallwey who wrote to his superior, Ford, regarding a contract for the supply of timber:

> *If we resort to competition for this supply, we shall receive bids from a number of needy and incompetent French Canadians like Richards who already have thrown back the progress of the works seriously.*[7]

The construction of the forts at Lévis underlined a truth common to all the construction undertaken by the British military

authorities since their arrival in Quebec City. They tried to keep the civilians at a distance. Up to 1855, they had always avoided using private contractors. Commanding Officer Gallwey tried to protect this state of affairs by endorsing the comparison between the two types of workforce: "I may state that the chief object in building one of the forts by Mil[itar]y Labour was to ascertain the comparative cost of the two systems — contract and Mil[itar]y Labour..."[8] Gallwey was certain that the military would be as efficient as the civilians. It would only be a step from there to show the uselessness and the futility of using private enterprise. In fact, the military authorities tried to remain as self-sufficient as they had happily been for a very long time.

But why did the military authorities want to perpetuate this tradition of life as a separate community? Again Gallwey comes to our rescue: "to encourage a wish to labour in the Army generally, whereby the Soldier might become less of an Automaton and a more useful Member of Society."[9] His reply is clear: military pride. The construction of Fort #1 was first and foremost an opportunity to give back to the soldier the pride and the collective identity that the more liberal conditions of life had seriously undermined during the 19th century. So Gallwey, in his commentary, expressed a desire for the old-style military life, and his wish to preserve it as he had known it. Perhaps, in this respect, the construction of Fort #1 turned out to be completely satisfactory....

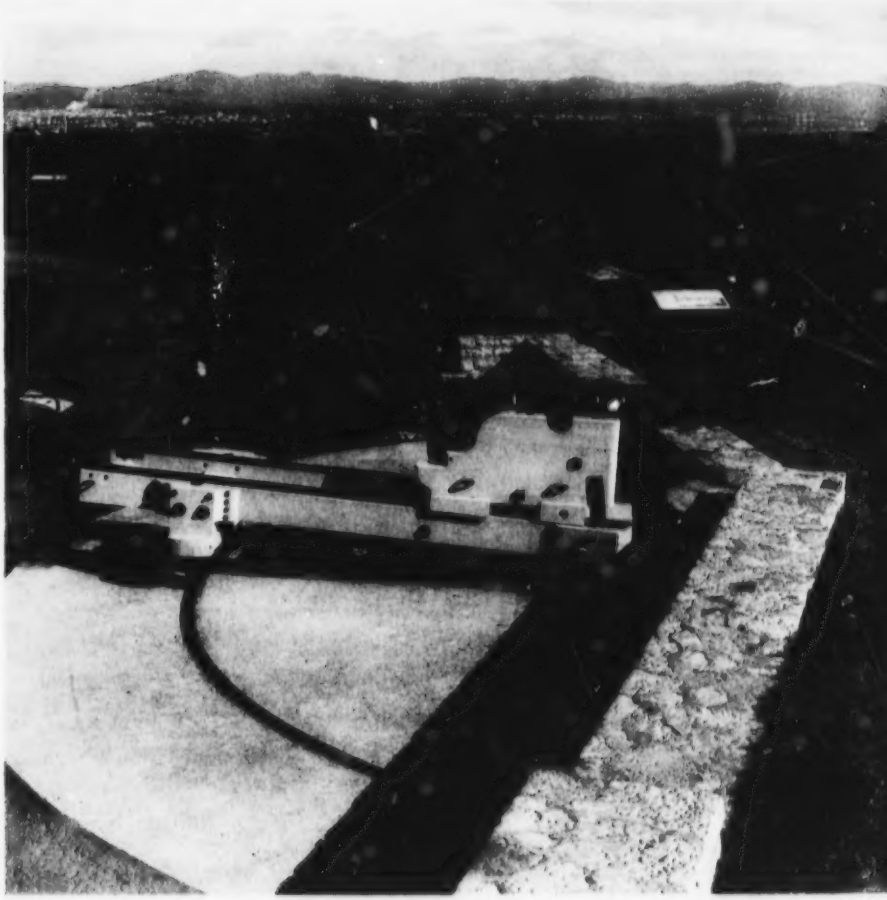
23 The Citadel of Quebec, taken from Fort #1's terreplein.
Photo: J. Beardsell, Canadian Parks Service, Quebec, Region, 1990, 119/00.

Epilogue, 1871-1947

None of the three forts constructed at such high cost on the heights of Point Lévy was ever garrisoned. Why? In 1871, the English diplomats resorted to their trusted weapon of diplomacy to end an ambiguous relationship with the United States. The Washington Treaty smoothed away all difficulties between the English and the Americans. Also European rivalries calmed down thanks to Britain's efficient mediation. From now on, Great Britain would leave the protection of Canada to the Canadian government. Because of the military strategy inherited from the empire, Quebec City gave way to Halifax.

The forts on Point Lévy then came under the control of the Canadian army's Artillery School (B Battery) whose headquarters were in the Citadel. Only a Junior Officer and 10 soldiers guarded the fort. They did not live there though but were housed in the Engineers' camp. As these soldiers were attached to the Citadel, orders were sent to them by signals, such as raising the Union Jack. For example, if the flag stayed up for 15 minutes, it meant that the Point Lévy guard was to open the doors of the powder magazines and casemates in order to air them.

Canada no longer had anything to fear from her neighbours to the south. This, along with budget cuts, meant that none of the forts was armed before 1878. That year, because of the Russian alarm, each fort received a seven-inch breech-loading rifled piece of ordnance. Great Britain was worried by Russian expansionism toward Turkey and India, a direct threat to all her colonies. This climate of tension made the Canadian ports fear raids and bombardment. The forts at Point Lévy, designed to repel a land invasion by the Americans, offered little protection from warships moving up the St. Lawrence. Defence could no longer be based on a land invasion but rather on naval manoeuvres. Thus, at the beginning of the 20th century, the defensive installations moved progressively eastward, mainly to Point



24 The only cannon ever installed on Fort #1's terreplein. This rifled Armstrong gun could shoot a 40-kg (90-lb) shell a distance of three km (about two miles).
Photo: J. Beardsell, Canadian Parks Service, Quebec Region, 1990, 119/00/PR-6/S-343.

25 Barracks in the former camp of the Royal Engineers, being used here about 1885 by soldiers on their annual manoeuvres.
Archives nationales du Québec, Quebec City, Coll. initiale, GH 671-45.

Martinière and Beaumont on the south shore, a bit downstream from Point Lévy, and to Saint-Jean on the Île d'Orléans where the Canadian army put up rapid-fire batteries to control the channel.

This reorganization of the defensive system ensured the progressive abandonment of the Port Lévy forts. The only remaining activity was the annual training camp for militiamen, which did not even take place within the forts' enclosure, but in the Engineers' camp. After 1880 civilians looked after the forts. At the very end of the 19th century, the armament of each included, apart from the seven-inch cannon, other smaller guns mounted in the caponiers to ensure the defence of the ditches.

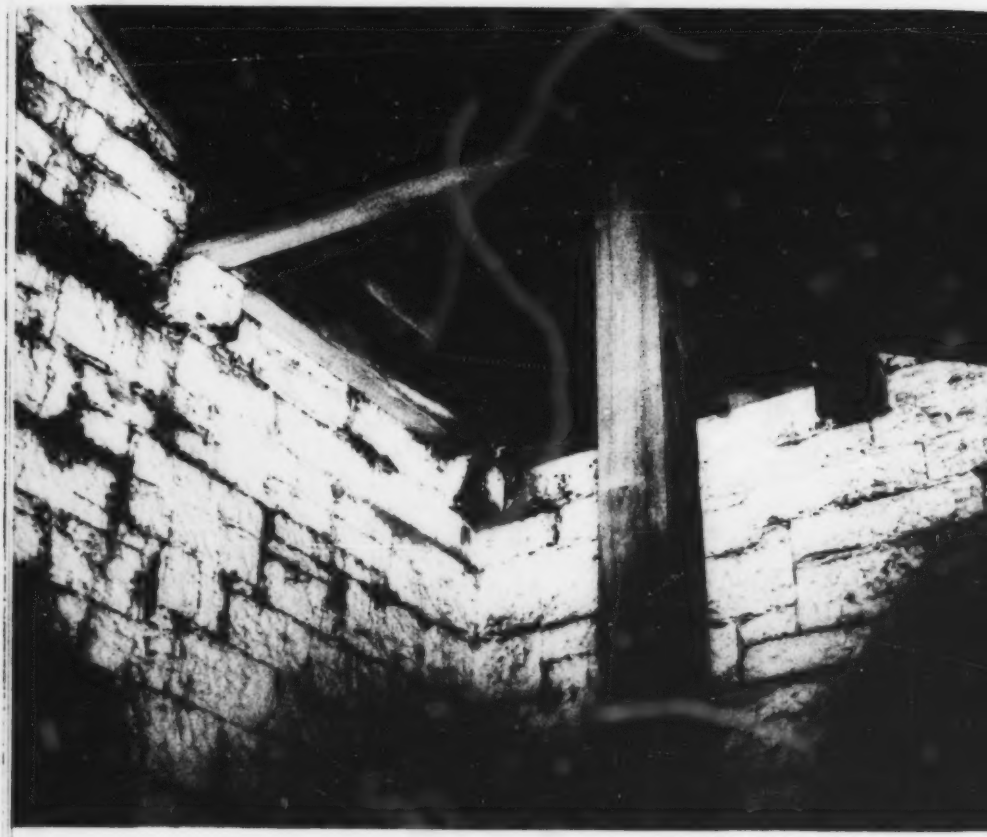
According to oral testimony, it seems that during the First World War Fort #1 served as a munitions depot and as barracks for troops awaiting transport to Europe. During the period between the two wars, the fort seems to have been still used as a warehouse. According to a report prepared by the Department of National Defence in 1939, the fortifications at Point Lévy were already considered as historic sites. However, the Second World War forced the military authorities to use them once more as munitions depots. On 15 November 1947, the Department of National Defence turned over the forts to the Department of Mines and Resources. Subsequently, Fort #2 was replaced by one of the buildings of the Desjardins financial co-operative, while Fort #3 was converted into a concrete factory. Only Fort #1 remains.

In spite of the fact that it was used so little, Fort #1 is of undeniable historic interest. An integral part of the defensive complex around Quebec City, it is an example of the change in fortification techniques, of the transition of military arts from classic to modern, from the continuous rampart to the detached fort. From an architectural point of view one has to admire the quality and beauty of the work. Its underground brick-vaulted passages and caponiers or the staircase resting on corbels in the

gorge caponier represent only some of the architectural highlights that would interest a visitor.

26 Vaulted underground passage leading to one of Fort #1's four caponiers.
Photo: J. Beardsell, Canadian Parks Service, Quebec Region, 1990, 119/00/PR-6/S-343.

27 Fort #1: the lines of brick vaults can only arouse the admiration of the visitor.
Photo: J. Beardsell, Canadian Parks Service, Quebec Region, 1990, 119/00/PR-6/S-343.



28 Fort #1: staircase joining the parade ground to the caponier of the gorge, north side; note the stone corbels on which it rests.
Photo: Canadian Parks Service, Engineering & Architecture, ca. 1975, 119/00/RE.6 (3C).

Notes

1. National Archives of Canada (hereafter NA), RG 9, II, A1, Vol. 600, p. 20, Report on the defence of Canada, 1864.
2. NA, RG 8, I, Vol. 1594, p. 213, Gallwey to Worthington, 9 Nov. 1867.
3. NA, RG 8, I, Vol. 486, p. 100-101, Gallwey to the Military Secretary, 11 August 1866.
4. NAC, RG 8, I, Vol. 1590, p. 307-8, Akers to Hassard, 27 July 1867.
5. NA, RG 8, I, Vol. 494, p. 24-26, Michel to Earle, 25 January 1869.
6. *Le Canadien*, Vol. 35, No. 47, 24 July 1865.
7. NA, RG 8, I, Vol. 1589, p. 151, Gallwey to Ford, 16 Nov. 1866.
8. NA, RG 8, I, Vol. 1591, p. 16-20, Point Lévis Fort #1, 19 Nov. 1867.
9. Ibid.

Suggested Readings

This document is largely based on manuscript documents in the National Archives of Canada, and especially on RG 8, I, British Military and Naval Documents. The quotations are mostly drawn from this source. For more information, the reader could consult the following studies:

Charbonneau, A., Y. Desloges, and M. Lafrance
Québec, The Fortified City, from the 17th to the 19th Century, Parks Canada, Ottawa, 1982.

Desloges, Y.
"La construction du fort #1, Saint-Joseph de la Pointe-Lévis, 1865-1872," Manuscript Report Series No. 415 (1971-72), Parks Canada, Ottawa.

Desloges, Y.
"L'historique du fort #1, Saint-Joseph de la Pointe-Lévis, 1864-1939," Manuscript Report Series No. 415 (1971-72), Parks Canada, Ottawa.

Renouvin, P.
Le XIX^{e} siècle. L'Europe des nationalités et l'éveil des nouveaux mondes, Hachette, Paris, 1968.

Winks, R.W
Canada and The United States; The Civil War Years, John Hopkins Press, Baltimore, 1960.